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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/684,207

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Stephen Gold

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INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

DILLON, SAMUEL A

ART UNIT

PAPER NUMBER

2185

NOTIFICATION DATE

DELIVERY MODE

07/09/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/684,207	Applicant(s) GOLD ET AL.	
	Examiner SAMUEL DILLON	Art Unit 2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Examiner acknowledges the applicant's submission of the amendment dated March 26, 2008. Per the amendment, Claims 1, 10, 13, 16, 19 and 23 have been amended and Claims 26 and 27 have been added.

I. RESPONSE TO AMENDMENT(S) / ARGUMENT(S)

2. Initially, the Examiner notes that Claim 23's status identifier reads "*(Previously Presented)*", the claim has been amended. For the purposes of further examination, the Examiner will interpret the status identifier as reading "*(Currently Amended)*".

3. Applicant's arguments with respect to the 35 U.S.C. 103(a) rejections of Claims 1-25 have been fully considered but they are **not persuasive**. The rejections have been upheld, and the Applicant directed below for traversal.

4. **The Applicant contends that Bolin as combined with Jennings fails to disclose or suggest at least ordering the list based on proximity of the remaining backup devices of the at least two backup devices to the first backup device.** The Examiner respectfully disagrees. Bolin discloses that the displayed cartridge location is determined at least partly based on proximity to other cartridges (*location "VLT 17 R1" means vault 17, rack 1, column 11 lines 1-7; both correspond to physical locations in figure 4 and are interpreted as being based on proximity in that sorting by the text displayed in figure 5 would involve at least a partial sorting based on what vault and rack the cartridge is on*).

The Examiner found it obvious to modify Bolin to display the physical location of each device in an equivalent way to the display of the cartridge location, and then to sort that list by physical location as taught by Jennings. Accordingly, the Examiner asserts that Bolin in view of

Art Unit: 2185

Jennings does indeed disclose ordering the list based on proximity of the remaining backup devices of the at least two backup devices to the first backup device.

5. Regarding all other Claims not specifically traversed above and whose rejections were upheld, the Applicant contends that the listed claims are allowable by virtue of their dependence on other allowable claims. As this dependence is the sole rationale put forth for the allowability of said dependent claims, the Applicant is directed to the Examiner's remarks above.

Additionally, any other arguments the Applicant made that were not specifically addressed in this Office Action appeared to directly rely on an argument presented elsewhere in the Applicant's response that was traversed, rendered moot or found persuasive above.

II. REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC ' 103 – Bolin and Jennings

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-9, 13-15, 19-22, 26 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolin et al. (*US Patent 5,664,146*) in view of Jennings ("*Using Access 97*").

8. As per **Claim 1**, Bolin disclose(s) a method comprising:

receiving a list comprising media (*cartridge, figure 5 and column 9 line 51 through column 10 line 43*) and at least two backup devices (*device 361 and 363, figure 5 and column 9 line 51 through column 10 line 43*), wherein a first medium of the list is assigned to a first backup device, and a second medium of the list is assigned to a second backup device (*as seen in figure 5*);

presenting at least the media portion of the ordered list to a user (*figure 5*).

Bolin shows the physical location of the cartridges when they are at the home location and not in a device (*the home location Vlt14R4 of figure 5 corresponds to a physical bin location in figure 4*), and also the device they are located in (*device 361/363, figure 5*), but does not show the physical location of the actual device. At the time of the invention, it would have been obvious to modify Bolin's dataserver GUI window to show a physical location of a device in an equivalent format as the home location. The motivation for doing so would have been obvious to a person having ordinary skill in the art and would have been the same as the motivation to show the physical location of the home location, making the device easier to find when there are a large number of devices or the devices are spread out over a large area (*such as is the case for home locations, column 10 lines 21-30 and figure 4*). Therefore, it would have been obvious to modify Bolin to include a physical location of the device in an equivalent format as the home location for the benefit of making the device easier to find when there are a large or widely distributed number of devices.

Additionally, Bolin does not disclose explicitly and purposefully ordering the list by physical location of the backup devices. Bolin does disclose a Windows-style GUI for displaying multiple columns, each column having a heading representing the data included in that column for each row. The Examiner notes that it is notoriously well known in the art in Windows-style GUI systems to be able to order a column in ascending or descending order if so desired. As an example, Jennings discloses ordering a set of rows by a given column in ascending or descending order (*sort ascending / sort descending buttons, table 3.2*). Bolin and Jennings are analogous art in that they both deal with Windows-style GUI lists with multiple columns.

At the time of the invention it would have been obvious to modify Bolin to allow sorting the list view of figure 5 by any of the given columns as taught by Jennings. The motivation for

Art Unit: 2185

doing so would have been obvious to a person having ordinary skill in the art and would have been that it allows the faster finding of a specific value for that column (*for example, to find what cartridge is in a specific device*). Therefore, it would have been obvious to modify Bolin to allow sorting by an arbitrary column as taught by Jennings for the benefit of quick visual searches of column values, to obtain the invention of Claim 1.

Accordingly, Bolin view of Jennings disclose(s) ordering the list by physical location of the at least two backup devices (*Jennings, as combined above*) based on proximity of the remaining devices of the at least two backup devices to the first backup device (*Bolin, location "VLT 17 R1" means vault 17, rack 1, column 11 lines 1-7; both correspond to physical locations in figure 4 and are interpreted as being based on proximity, so sorting by the text displayed in figure 5 would involve at least a partial sorting based on what vault and rack the cartridge is on*).

9. As per **Claim 2**, Bolin and Jennings disclose(s) the method of Claim 1, further comprising before receiving the list, configuring a physical location for each of the backup devices (*Bolin, as combined above, to display the list of each physical location for the devices, a physical location must have been configured, figure 5*).

10. As per **Claim 3**, Bolin and Jennings disclose(s) the method of Claim 2, wherein configuring the physical location comprises obtaining information for one or more site locations and assigning each of the backup devices to one of the site locations (*Bolin, as combined above, any physical location can be considered a 'site' location, column 10 lines 21-30*).

11. As per **Claim 4**, Bolin and Jennings disclose(s) the method of Claim 3, wherein configuring the physical location further comprises:

obtaining information for one or more data centers, each of the data centers
associated with one of the site locations (*Bolin, the data center is considered the set of*

one backup device at that location, the information for the data center being the physical location of the data center, column 10 lines 21-30); and

assigning each of the backup devices to one of the data centers (Bolin, as combined above, assigning a physical location to the device).

12. As per **Claims 5, 6, 21 and 22**, Bolin and Jennings disclose(s) the method of Claim 2, and as combined disclose assigning a physical location to a backup device and logging this information as data in a list, but do not appear to disclose the physical location comprises assigning a grid location in a data center to at least one of the backup devices, or a grid location containing an order number. However these differences are only found in the nonfunctional descriptive material and do not change how the invention functions. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Circ. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the physical location be a grid location because the subjective interpretation of the data does not patentably distinguish the claimed invention.

13. As per **Claim 7**, Bolin and Jennings disclose(s) the method of Claim 5, wherein assigning a grid location comprises for at least one of the backup devices, automatically assigning, to the backup device, a grid location of a system attached to the backup device (*Bolin, if the physical location of an operational backup device can be considered a grid location, then the immediate system of connection (like a plug) to which the device is connected can be considered to have the same grid location*).

Art Unit: 2185

14. As per **Claim 8**, Bolin and Jennings disclose(s) the method of Claim 1, wherein ordering the list comprises ordering the list of media by an order number associated with each of the backup devices (*Bolin, order number would be physical location*).

15. As per **Claim 9**, Bolin and Jennings disclose(s) the method of Claim 1, wherein receiving the list comprises: receiving a list of media from a user to be used for one or more future executions of one or more backup jobs associated with the backup devices (*Bolin, all the cartridges are used for storage of data, and are either intended to be written to or read from in the future, figure 5, alternatively step 260 of figure 6 can be considered as sending a list of one media to be loaded and used, figure 6*).

16. As per **Claim 13**, Bolin and Jennings disclose(s) a system comprising:

a planner to receive a list comprising media (*Bolin, cartridge, figure 5 and column 9 line 51 through column 10 line 43*) and at least two backup devices (*Bolin, device 361 and 363, figure 5 and column 9 line 51 through column 10 line 43*), wherein a first medium in the list is assigned to a first backup device, and a second medium in the list is assigned to a second backup device (*Bolin, as seen in figure 5*), and to order the list by physical location of the at least two backup devices (*Jennings, table 3.2*) based on proximity of the remaining devices of the at least two backup devices to the first backup device (*Bolin, location "VLT 17 R1" means vault 17, rack 1, column 11 lines 1-7; both correspond to physical locations in figure 4 and are interpreted as being based on proximity, so sorting by the text displayed in figure 5 would involve at least a partial sorting based on what vault and rack the cartridge is on*); and

a user interface, communicatively coupled to the planner, to present at least the media portion of the ordered list to a user (*Bolin, figure 5*).

Art Unit: 2185

17. As per **Claim 14**, Bolin and Jennings disclose(s) the system of Claim 13, further comprising a configuration agent, communicatively coupled to said planner, to configure a physical location for each of the backup devices (*Bolin, as combined above, a human*).

18. As per **Claim 15**, Bolin and Jennings disclose(s) the system of Claim 13, wherein said user interface is further to receive a list of media to be used for one or more future executions of one or more backup jobs associated with the backup device and to transmit the list to said planner (*Bolin, all the cartridges are used for storage of data, and are either intended to be written to or read from in the future, figure 5, alternatively step 260 of figure 6 can be considered as sending a list of one media to be loaded and used, figure 6*).

19. As per **Claim 19**, Bolin and Jennings disclose(s) at least one machine-readable medium having stored thereon sequences of instructions, which, when executed by a machine, cause the machine to perform the actions of:

receiving a list comprising media (*Bolin, cartridge, figure 5 and column 9 line 51 through column 10 line 43*) and at least two backup devices (*Bolin, device 361 and 363, figure 5 and column 9 line 51 through column 10 line 43*), wherein a first medium of the list is assigned to a first backup device, and a second medium of the list is assigned to a second backup device (*Bolin, as seen in figure 5*);

ordering the list by physical location of the at least two backup devices (*Jennings, table 3.2*) based on proximity of the remaining devices of the at least two backup devices to the first backup device (*Bolin, location "VLT 17 R1" means vault 17, rack 1, column 11 lines 1-7; both correspond to physical locations in figure 4 and are interpreted as being based on proximity, so sorting by the text displayed in figure 5 would involve at least a partial sorting based on what vault and rack the cartridge is on*); and

presenting at least the media portion of the ordered list to a user (*Bolin, figure 5*).

Art Unit: 2185

20. As per **Claim 20**, Bolin and Jennings disclose(s) the medium of Claim 19, wherein the instructions comprise instructions, which, when executed by the machine, cause the machine to perform the actions of before receiving the list, configuring a physical location for each of the backup devices (*Bolin, as combined above, to display the list of each physical location for the devices, a physical location must have been configured, figure 5*).

21. As per **Claim 24**, Bolin and Jennings disclose(s) the method of Claim 1, wherein the media are physically loaded into a backup device by a user in at least two different physical locations (*Bolin, figure 5*).

22. As per **Claim 25**, Bolin and Jennings disclose(s) the method of Claim 1, wherein the at least two backup devices are assigned to two different site locations and wherein the ordering comprises ordering the list by physical location of the site locations of the at least two backup devices (*Bolin, as combined, where site locations are the physical locations of the devices, figure 5*).

23. As per **Claim 26**, Bolin and Jennings disclose(s) the method of Claim 4, wherein configuring the physical location comprises: assigning a global order number to a data center based on proximity of the data center to a first data center (*Bolin, vault number, where the devices are stored in an equivalent manner as cartridges, column 11 lines 1-7*).

24. As per **Claim 27**, Bolin and Jennings disclose(s) the method of Claim 8, wherein the ordering the list by an order number comprises ordering the list by an order number indicative of the proximity of a backup device to the first backup device (*Bolin, vault number, where the devices are stored in an equivalent manner as cartridges, column 11 lines 1-7*).

Claims Rejections – 35 USC ‘ 103 – Bolin, Jennings and Kanai

25. **Claims 10-12, 16-18 and 23** are rejected 35 U.S.C. 103(a) as being unpatentable over Bolin et al. (US Patent 5,664,146) and Jennings (“Using Access 97”) as combined above, in further view of Kanai (US Patent Publication 2002/0152181).

26. As per **Claims 10, 16 and 23**, but more specifically to Claim 10, Bolin and Jennings as combined disclose(s) a method comprising:

receiving a list comprising media (*Bolin, cartridge, figure 5 and column 9 line 51 through column 10 line 43*) and at least two backup devices (*Bolin, device 361 and 363, figure 5 and column 9 line 51 through column 10 line 43*), wherein a first medium in the list is assigned to a first backup device, and a second medium in the list is assigned to a second backup device (*Bolin, as in figure 5*);

ordering the list by physical location of the at least two backup devices (*Jennings, table 3.2*) based on proximity of the remaining devices of the at least two backup devices to the first backup device (*Bolin, location “VLT 17 R1” means vault 17, rack 1, column 11 lines 1-7; both correspond to physical locations in figure 4 and are interpreted as being based on proximity, so sorting by the text displayed in figure 5 would involve at least a partial sorting based on what vault and rack the cartridge is on*); and

presenting at least the media portion of the ordered list to a user (*Bolin, figure 5*),

wherein receiving a list of media from a user to be used for one or more future executions of one or more backup jobs associated with the backup devices (*Bolin, all the cartridges are used for storage of data, and are either intended to be written to or read from in the future, figure 5, alternatively step 260 of figure 6 can be considered as sending a list of one media to be loaded and used, figure 6*).

Art Unit: 2185

Bolin and Jennings do not appear to disclose said method further comprising, before receiving the list, calculating a required number of scratch media needed for future executions of a backup job and presenting the required number of scratch media to the user.

Kanai discloses calculating a number of media needed for future executions of a backup job and presenting the required number of scratch media to a user (*paragraphs 18-19*).

Bolin as combined with Jennings and Kanai are analogous art in that they have to do with data storage. At the time of the invention it would have been obvious to a person having ordinary skill in the art to modify the GUI of Bolin and Jennings to show the number of scratch media needed by a user, as taught by Kanai. The motivation for doing so would have been that rented storage allows users to be released from the burden of maintenance of storage and thereby have less responsibility of administration (*Kanai, paragraph 5*). Therefore, it would have been obvious to combined the system of Bolin and Jennings with Kanai's rented storage for the benefit of easier administration, to obtain the inventions of Claims 10, 16 and 23.

27. As per **Claims 11 and 17**, but more specifically to Claim 11, Bolin, Jennings and Kanai disclose(s) the method of Claim 10, wherein calculating comprises: obtaining backup job information from one or more backup applications for the backup jobs (*Kanai, history of usage, paragraph 18*); and using the backup job information to calculate the required number of scratch media needed for the future executions (*Kanai, paragraph 18*).

28. As per **Claims 12 and 18**, but more specifically to Claim 12, Bolin, Jennings and Kanai disclose(s) the method of Claim 10, wherein calculating the required number of scratch media comprises for at least one of the future executions, dividing an average historical backup size of the backup job by an average capacity of a media type associated with the backup job (*Kanai, figure 17*).

III. CLOSING COMMENTS

29. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

a. STATUS OF CLAIMS IN THE APPLICATION

30. The following is a summary of the treatment and status of all claims in the application as recommended by M.P.E.P. ' 707.07(i):

a(1). CLAIMS REJECTED IN THE APPLICATION

31. Per the instant office action, Claims 1-27 have received an action on the merits and are subject of a final action.

b. DIRECTION OF FUTURE CORRESPONDENCES

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Dillon whose telephone number is 571- 272-8010. The examiner can normally be reached on 9:30-6:00.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on 571-272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2185

IMPORTANT NOTE

34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SAD

Sam Dillon
Examiner
Art Unit 2185

/Sanjiv Shah/
Supervisory Patent Examiner, Art Unit 2185